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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,604	03/29/2004	Pierattilio Di Gregorio	6023-175US (BX2592M)	2819

570 7590 08/16/2004

AKIN GUMP STRAUSS HAUER & FELD L.L.P.
ONE COMMERCE SQUARE
2005 MARKET STREET, SUITE 2200
PHILADELPHIA, PA 19103-7013

EXAMINER

BECK, DAVID THOMAS

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/811,604

Applicant(s)

GREGORIO, PIERATTILIO DI

Examiner

David T Beck

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03/29/2004.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
4a) Of the above claim(s) 9-11 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-8 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-8, drawn to a process, classified in class 264, subclass 295.
 - II. Claims 9-11, drawn to a product, classified in class 428, subclass 172.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made by a materially different process such as by forming the panel in a mold having a curved shape.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Mr. Schwarze on July 8, 2004 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-8. Affirmation of this election must be made by applicant in replying to this Office action. Claims 9-11 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 7 is rejected for lack of antecedent basis. Claim 7 recites the limitation "the position" with regard to the said third element. There is insufficient antecedent basis for this limitation in the claim because no position for the third element has previously been established. The examiner suggests that the applicant amend claim 2 to specify that the third element be placed "in a position parallel to said two rollers" to provide the necessary antecedent basis.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benson et al (5,107,649) in view of the teaching of Yamashita et al (6,339,946).

With regard to claims 1-3, Benson discloses a known procedure for producing a planar vacuum panel, (column 4, line 40-52). Benson further discloses that the panel can be curved into a cylinder, (column 9, lines 22-26 and Figure 18). Benson does not disclose the method by which the panel is curved, but does disclose that the panel may comprise two adjacent metal sheets, (see column 4, line 8-17). Attention is drawn to Yamashita, which discloses a method for curving metal sheets (see column 3, lines 1-7)

through calendaring by using two rollers and a third element (a roller) of equal length placed parallel to the two rollers, (see Figures 7A and 7B and).

It is noted that the applicant has admitted that the "...operation of calendaring is well known and applied in the mechanical field for curving metallic plates..." (see Applicant's specification, page 3, line 16). It is also noted that the planar vacuum panel disclosed by Benson is comprised primarily of metal sheets, (see column 4, line 8-17) and that Benson teaches that these sheets are curved by some process, (see column 9, lines 22-26 and Figure 18). Sheets are equivalent to plates. Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have produced the curve in the curved panel described by Benson by using a calendaring process carried out by passing the planar vacuum panel between at least two rollers and a third element (roller) of length equal to that of the rollers and placed parallel to the two rollers as described in Yamashita.

9. With regard to claim 7, Yamashita also discloses a method for curving metal panels through calendaring by using two rollers and a third element of equal length placed parallel to the two rollers where the position of the third element (a roller) is continuously modified during the calendaring operation, (see column 6, lines 21-28 and Figures 7A and 7B). Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have produced the curve in the curved panel described by Benson by using a calendaring process carried out by passing the planar vacuum panel between at least two rollers and a third element of length equal to that of the rollers and placed parallel to the two rollers and further to

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continuously modify the position of the third element during the calendering operation as described in Yamashita.

10. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benson et al (5,107,649) in view of the teaching of Yamashita et al (6,339,946) and Nishimoto (6,336,693).

With regard to claims 4 and 5, the teachings of Benson in view of Yamashita are as indicated in the rejection above. However, Benson in view of Yamashita does not teach the use of polyurethane foam or the particular dimensions. Nevertheless, it would have been further prima facie obvious to subject a vacuum panel that is comprised of, as filling material, rigid polyurethane foam, with a thickness lower than 20 mm (as in claim 4) or between 8 and 15 mm (as in claim 5) to the calendaring process in view of Nishimoto which discloses that it is known to construct vacuum panels using hard polyurethane foam having a thickness in a range of 10 to 20 mm (see column 3, lines 47-58). Moreover, in the case where the claimed ranges 'overlap or lie inside ranges disclosed by the prior art' a prima facie case of obviousness exists. *In re Werthiem*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Benson et al (5,107,649) in view of the teaching of Yamashita et al (6,339,946), Boes et al (6,132,837), and Richard J. Lewis, SR., *Hawley's Condensed Chemical Dictionary*, 1993, Van Nostrand Reinhold, 12th Edition, Page 960.

With regard to claim 6, the teachings of Benson in view of Yamashita are as indicated in the rejection above. However, Benson in view of Yamashita does not teach the use of silica powder or the particular dimensions. Nevertheless, it would have been further prima facie obvious to subject a vacuum panel that is comprised of, as filling material, silica powder, with a thickness between 5 and 20 mm (as in claim 6) to the calendaring process in view of Boes which discloses that it is known to construct vacuum panels using precipitated silica having a thickness in a range of 1 to 100 mm (see column 6, lines 7-8 and 20-21). Precipitated silica is, by definition, powdered silica as "powder" is defined as "Any solid, dry material of extremely small particle size...prepared...by...precipitation via chemical reaction." (see Hawley's Condensed Chemical Dictionary, page 960). Moreover, in the case where the claimed ranges 'overlap or lie inside ranges disclosed by the prior art' a prima facie case of obviousness exists. *In re Werthiem*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

12. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Benson et al (5,107,649) in view of the teaching of Yamashita et al (6,339,946), Roos (4,918,112), and Haase (4,011,357).

With regard to claim 8, the teachings of Benson in view of Yamashita are as indicated in the rejections above in that they show a prima facie case of obviousness for the method of claim 1 upon which claim 8 depends. Furthermore, Benson also teaches that spacer beads coated with a polystyrene or similar adhesive material are to be affixed to the wall sheets of the planar vacuum panel, (column 7, lines 9-14), thus

necessarily creating at least a layer of polymeric adhesive on at least one surface of the panel. Benson teaches that the panel is subsequently bent, (column 7, lines 2-8). As stated above, it is prima facie obvious from the teachings of Benson in view of Yamashita that the panel would be bent through a calendaring operation.

However, Benson and Yamashita do not teach that the polystyrene layer in the panel disclosed by Benson is in a foam state. However, Rook discloses the use of polymeric foam as an adhesive (column 6, lines 24-36). Haase discloses that polystyrene can be foamed (column 2, lines 47-56). Therefore, it can be reasoned that foamed polystyrene would be a similar adhesive material to polystyrene as disclosed by Benson. Furthermore, Benson recognizes that polystyrene has desirable insulating properties (column 7, lines 34-40) and the use of foamed polystyrene as adhesive would enhance the insulating properties of the vacuum panel as a whole. Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have placed adhesive polymeric foam on at least one surface of a vacuum panel and to have curved the panel through calendaring for the reasons discussed above.

Prior Art Cited in the International Search Report

13. References WO/0202986 and WO/0202987 which were disclosed as "X" documents in the international search report for PCT/IT 02/00808 were considered but were not used in a rejection of this application because the references referred only to

vacuum panels as products and did not disclose a method of producing or shaping vacuum panels.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David T. Beck whose telephone number is 571-272-2942. The examiner can normally be reached on Monday - Thursday, 8am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on 517-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MICHAEL P. COLAIANNI
SUPERVISORY PATENT EXAMINER